

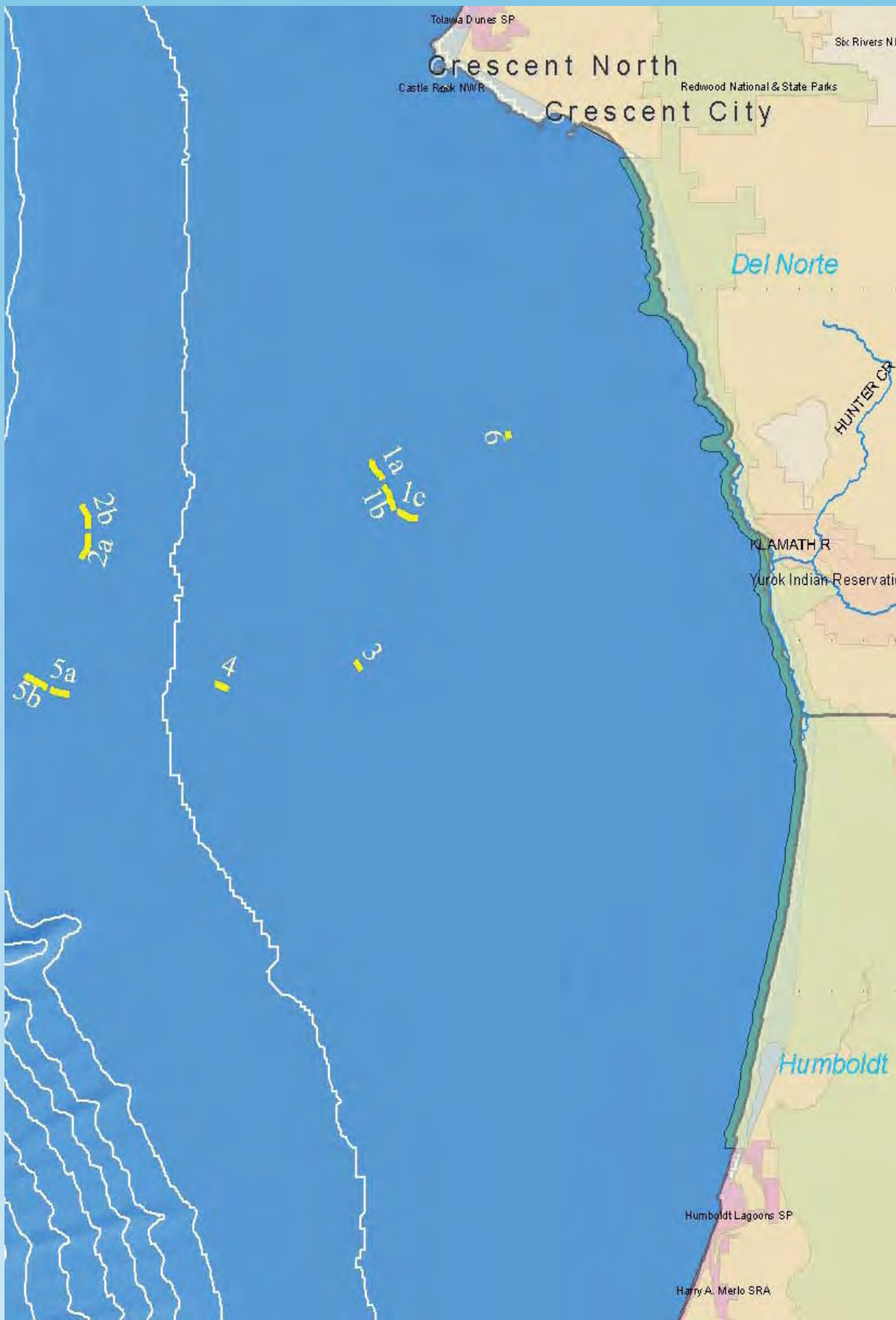
# Site Characterization of Seafloor Communities Adjacent to the Klamath River Delta Using a Towed Camera Sled

Ryan Fura and James Lindholm  
Institute for Applied Marine Ecology (IfAME), California State University Monterey Bay

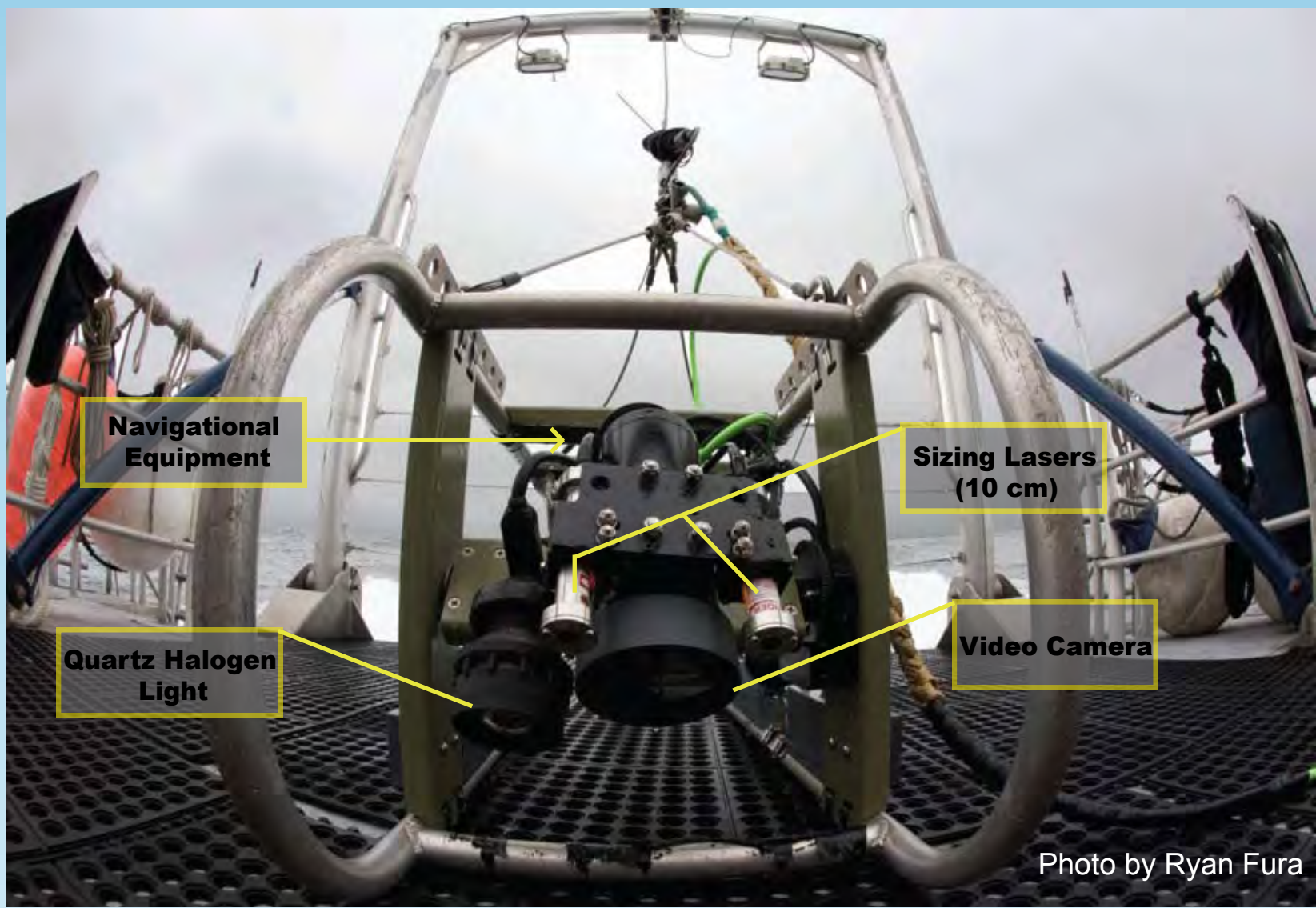
## Introduction

Site characterizations of the marine environment advance our basic understanding of marine systems in which little information is available and can provide critical baseline data to support future monitoring efforts. In 2007 the Yurok Tribe of northern California initiated a process to establish a National Marine Sanctuary to protect the marine environment adjacent to their ancestral homelands along the Klamath River. In the fall of 2008 a towed camera sled was used to collect continuous videographic data along the seafloor over low-relief unconsolidated sediments. A frame by frame video analysis of the data was conducted in order to quantify species diversity, abundance and distribution of fish and invertebrate taxa.

## Data Collection



A total of ten video transects ranging in length from 0.39 to 1.49km, were conducted in depths ranging from 40 to 145m. Optimal sled altitude was 0.1m above the seafloor.

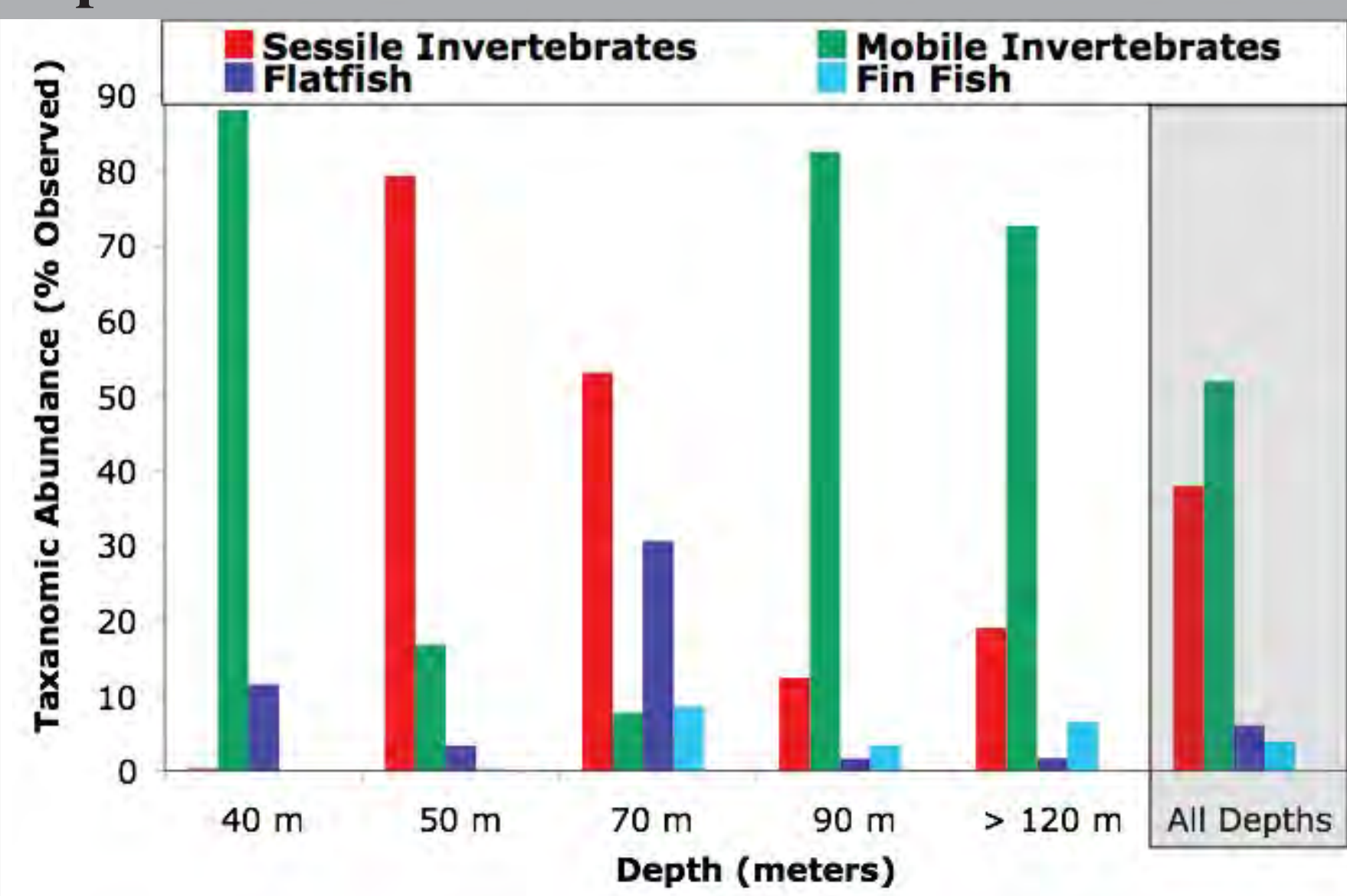


## Preliminary Results

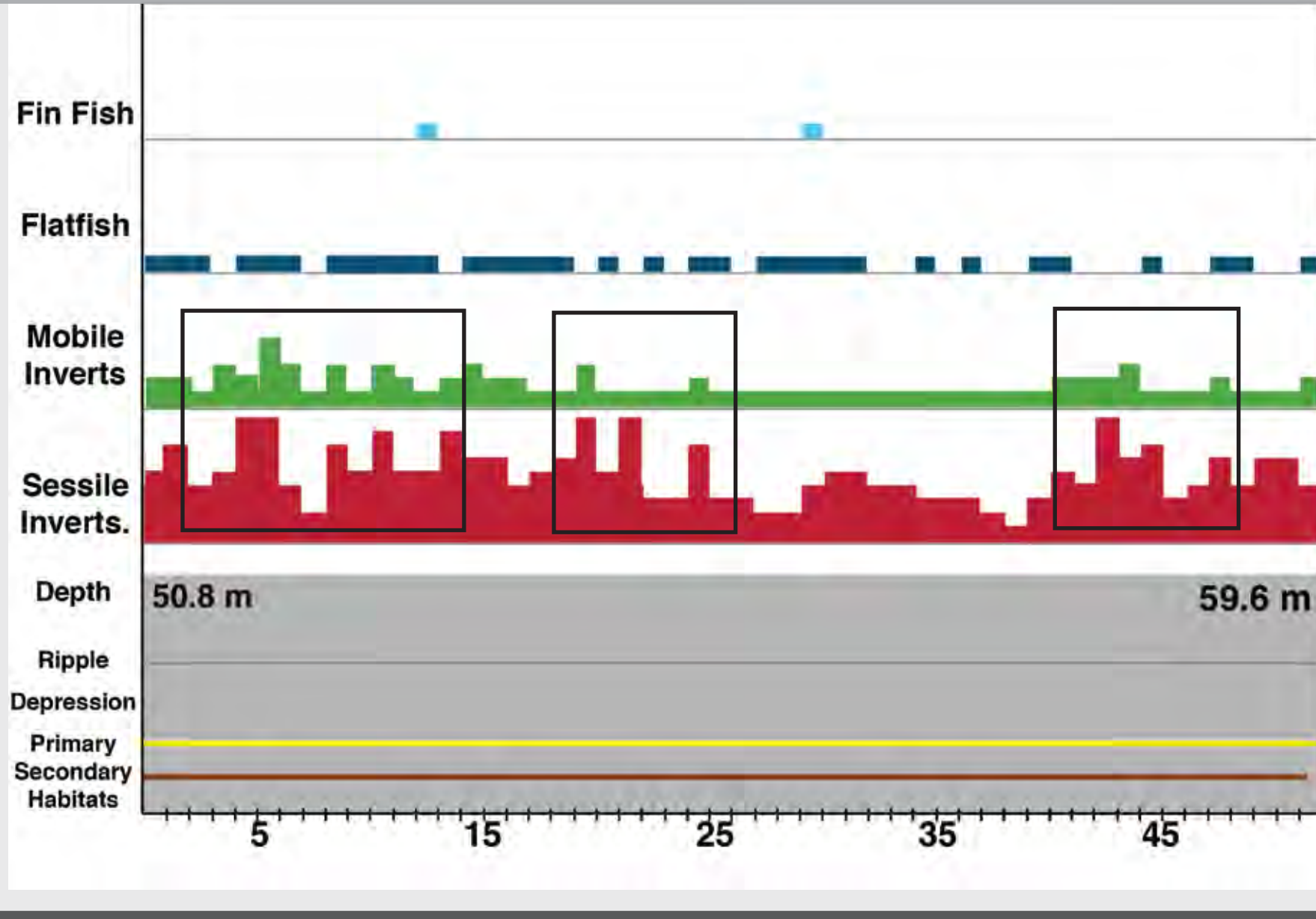
The highest areas of species diversity occurred between 50m and 90m.

	Simpson's Index	Depth	# of Species
High Diversity	0.27	55m	24
	0.27	70m	17
	0.30	> 120m	34
	0.39	90m	21
Low Diversity	0.68	40m	9

The dominant taxonomic groups change with depth.



Mobile invertebrates associate with sessile invertebrates.



## Dominant Species



## Discussion

The seafloor communities adjacent to the Klamath River appear to be diverse and highly productive. The establishment of this baseline data set is not only crucial in moving forward with Yurok efforts to designate the area as a National Marine Sanctuary, but will also provide scientists and managers with a better understanding of the effects of anthropogenic and natural disturbances in the region.

## Future Work

Currently a 3-D EcoViz video is being developed as an education and outreach tool for the sanctuary program. The video will include a 3-D modeled ecosystem, and actual videographic data.



**Acknowledgments:**  
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